

IN THE CLAIMS:

Claim 1. (ORIGINAL) A method for detecting a change in posture of a subject, the method comprising:

measuring an electrical impedance between two or more sites on a stomach of the subject, and generating an impedance signal responsive thereto; and

detecting the change in posture by performing a posture analysis of the impedance signal.

Claim 2. (ORIGINAL) The method according to claim 1, comprising:

detecting an indication of potential eating by the subject by performing an eating analysis of the impedance signal; and

responsive to the posture analysis, interpreting the impedance signal as indicative of eating.

Claims 3-20. (CANCELLED)

Claim 21. (ORIGINAL) A method for treating a subject, comprising:

applying an electrical signal to a site of the subject selected from the list consisting of: a colon of the subject, and a distal small intestine of the subject; and

configuring the signal to stimulate cells of the subject to increase secretion of glucagon-like-peptide-1 (GLP-1), in order to treat the subject.

Claim 22. (ORIGINAL) The method according to claim 21, wherein the cells include L-cells, and wherein configuring the signal comprises configuring the signal to stimulate the L-cells to increase the secretion of the GLP-1.

Claim 23. (ORIGINAL) The method according to claim 21, wherein the site includes the colon, and wherein applying the signal comprises applying the signal to the colon.

Claim 24. (ORIGINAL) The method according to claim 21, wherein the site includes the distal small intestine, and wherein applying the signal comprises applying the signal to the distal small intestine.

Claim 25. (ORIGINAL) The method according to claim 21, comprising selecting a subject suffering from obesity, and wherein applying the signal comprises applying the signal to the site of the selected subject.

Claim 26. (ORIGINAL) The method according to claim 21, comprising selecting a subject suffering from a condition selected from the list consisting of: NIDDM, heart disease, and hypertension, and wherein applying the signal comprises applying the signal to the site of the selected subject.

Claim 27. (ORIGINAL) The method according to claim 21, wherein applying the signal comprises applying the signal not responsively to detecting eating by the subject.

Claim 28. (ORIGINAL) The method according to claim 21, wherein applying the signal comprises applying the signal periodically.

Claim 29. (ORIGINAL) The method according to claim 21, wherein configuring the signal comprises varying at least one parameter of the signal in real time.

Claim 30. (CURRENTLY AMENDED) The method according to ~~any one of claims 21-29~~ claim 21, wherein applying the signal comprises applying an excitable tissue control (ETC) signal to the site.

Claim 31. (ORIGINAL) The method according to claim 30, comprising sensing natural electrical activity of the site, wherein applying the ETC signal comprises applying the ETC signal responsive to the sensed natural electrical activity.

Claim 32. (CURRENTLY AMENDED) The method according to ~~any one of claims 21-29~~ claim 21, wherein configuring the signal comprises:

detecting an occurrence selected from the list consisting of: an occurrence of eating, an occurrence of excessive eating, and an occurrence of an elevated blood glucose level; and

responsive to detecting the occurrence, increasing a strength of the signal.

Claim 33. (ORIGINAL) The method according to claim 32, wherein applying the signal comprises applying the signal in bursts of pulses, and wherein increasing the strength of the signal comprises increasing a frequency of the pulses in each of the bursts.

Claim 34. (ORIGINAL) The method according to claim 32, wherein applying the signal comprises applying the signal in bursts of pulses, and wherein increasing the strength of the signal comprises decreasing a spacing between successive bursts.

Claim 35. (CURRENTLY AMENDED) The method according to ~~any one of claims 21-29~~ claim 21, wherein applying the signal comprises applying the signal in bursts of pulses.

Claim 36. (ORIGINAL) The method according to claim 35, wherein configuring the signal comprises configuring a spacing between successive bursts to have a duration of between about 1 and about 10 seconds.

Claim 37. (ORIGINAL) The method according to claim 35, wherein configuring the signal comprises configuring a frequency of the pulses within each of the bursts to be between about 1 and about 200 Hz.

Claim 38. (ORIGINAL) The method according to claim 37, wherein configuring the signal comprises configuring a frequency of the pulses within each of the bursts to be between about 5 and about 50 Hz.

Claim 39. (CURRENTLY AMENDED) The method according to ~~any one of~~ ~~claims 21-29~~ claim 21, comprising detecting eating by the subject, wherein applying the electrical signal comprises applying the signal responsive to detecting the eating.

Claim 40. (ORIGINAL) The method according to claim 39, wherein applying the signal responsive to detecting the eating comprises commencing applying the signal at a time selected from the list consisting of: substantially simultaneously with a commencement of the eating, between about one and about 5 minutes after the commencement of the eating, and between about one and about 5 minutes prior to the commencement of the eating.

Claim 41. (ORIGINAL) The method according to claim 39, wherein detecting the eating comprises:

- measuring an electrical impedance between two or more sites on a stomach of the subject, and generating an impedance signal responsive thereto;

- detecting a change in posture of the subject by performing a posture analysis of the impedance signal;

- detecting an indication of potential eating by the subject by performing an eating analysis of the impedance signal; and

- responsive to the posture analysis, interpreting the impedance signal as indicative of the eating.

Claim 42. (ORIGINAL) The method according to claim 39, wherein detecting the eating comprises:

- measuring an electrical impedance between two or more sites on a stomach of the subject, and generating an impedance signal responsive thereto;

- comparing a measure of a sudden, sustained change in the impedance signal to a threshold; and

- detecting the eating by analyzing the impedance signal, and responsive to the comparing.

Claim 43. (ORIGINAL) The method according to claim 39, wherein detecting the eating comprises analyzing an electrical measurement of the stomach, and, responsive to the analysis, determining whether an electrical event indicative of a slow wave has occurred.

Claims 44-73. CANCELLED)

Claim 74. (ORIGINAL) Apparatus for detecting a change in posture of a subject, comprising:

- two electrodes, adapted for coupling to respective sites on a stomach of the subject; and

- a control unit, adapted to:

  - drive a current between the electrodes,

  - measure, responsive to the current, an electrical impedance between the sites,

  - generate an impedance signal responsive to the measured electrical impedance, and

  - detect the change in posture by performing a posture analysis of the impedance signal.

Claim 75. (ORIGINAL) The apparatus according to claim 74, wherein the control unit is adapted to:

detect an indication of potential eating by the subject by performing an eating analysis of the impedance signal; and

responsive to the posture analysis, interpret the impedance signal as indicative of eating.

Claims 76-93. CANCELLED)

Claim 94. (ORIGINAL) Apparatus for treating a subject, comprising:

at least one electrode, adapted to be coupled to a site of the subject selected from the list consisting of: a colon of the subject, and a distal small intestine of the subject; and

a control unit, adapted to drive the at least one electrode to apply an electrical signal to the site, and to configure the signal to stimulate cells of the subject to increase secretion of glucagon-like-peptide-1 (GLP-1), in order to treat the subject.

Claim 95. (ORIGINAL) The apparatus according to claim 94, wherein the cells include L-cells, and wherein the control unit is adapted to configure the signal to stimulate the L-cells to increase the secretion of the GLP-1.

Claim 96. (ORIGINAL) The apparatus according to claim 94, wherein the site includes the colon, and wherein the control unit is adapted to apply the signal to the colon.

Claim 97. (ORIGINAL) The apparatus according to claim 94, wherein the site includes the distal small intestine, and wherein the control unit is adapted to apply the signal to the distal small intestine.

Claim 98. (ORIGINAL) The apparatus according to claim 94, wherein the control unit is adapted to configure the signal to be suitable for treating a condition selected from the list consisting of: obesity, NIDDM, heart disease, and hypertension.

Claim 99. (ORIGINAL) The apparatus according to claim 94, wherein the control unit is adapted to apply the signal in the absence of detecting eating by the subject.

Claim 100. (ORIGINAL) The apparatus according to claim 94, wherein the control unit is adapted to apply the signal periodically.

Claim 101. (ORIGINAL) The apparatus according to claim 94, wherein the control unit is adapted to vary at least one parameter of the signal in real time.

Claim 102. (CURRENTLY AMENDED) The apparatus according to ~~any one of claims 94-101~~ claim 94, wherein to apply the signal, the control unit is adapted to apply an excitable tissue control (ETC) signal to the site.

Claim 103. (ORIGINAL) The apparatus according to claim 102, wherein the control unit is adapted to sense natural electrical activity of the site, and to apply the ETC signal responsive to the sensed natural electrical activity.

Claim 104. (CURRENTLY AMENDED) The apparatus according to ~~any one of claims 94-101~~ claim 94, wherein the control unit is adapted to:

detect an occurrence selected from the list consisting of: an occurrence of eating, an occurrence of excessive eating, and an occurrence of an elevated blood glucose level; and

responsive to detecting the occurrence, increase a strength of the signal.

Claim 105. (ORIGINAL) The apparatus according to claim 104, wherein the control unit is adapted to apply the signal in bursts of pulses, and to increase the strength of the signal by increasing a frequency of the pulses in each of the bursts.

Claim 106. (ORIGINAL) The apparatus according to claim 104, wherein the control unit is adapted to apply the signal in bursts of pulses, and increase the strength of the signal by decreasing a spacing between successive bursts.

Claim 107. (CURRENTLY AMENDED) The apparatus according to ~~any one of claims 94-104~~ claim 94, wherein the control unit is adapted to apply the signal in bursts of pulses.

Claim 108. (ORIGINAL) The apparatus according to claim 107, wherein the control unit is adapted to configure a spacing between successive bursts to have a duration of between about 1 and about 10 seconds.

Claim 109. (ORIGINAL) The apparatus according to claim 107, wherein the control unit is adapted to configure a frequency of the pulses within each of the bursts to be between about 1 and about 200 Hz.

Claim 110. (ORIGINAL) The apparatus according to claim 109, wherein the control unit is adapted to configure the frequency of the pulses within each of the bursts to be between about 5 and about 50 Hz.

Claim 111. (CURRENTLY AMENDED) The apparatus according to ~~any one of claims 94-104~~ claim 94, wherein the control unit is adapted to detect eating by the subject, and to apply the electrical signal responsive to detecting the eating.

Claim 112. (ORIGINAL) The apparatus according to claim 111, wherein to apply the signal responsive to detecting the eating, the control unit is adapted to commence applying the signal at a time selected from the list consisting of: substantially simultaneously with a commencement of the eating, between about one and about 5 minutes after the commencement of the eating, and between about one and about 5 minutes prior to the commencement of the eating.



Claim 113. (ORIGINAL) The apparatus according to claim 111, wherein to detect the eating, the control unit is adapted to:

measure an electrical impedance between two or more sites on a stomach of the subject, and generate an impedance signal responsive thereto,

detect a change in posture of the subject by performing a posture analysis of the impedance signal,

detect an indication of potential eating by the subject by performing an eating analysis of the impedance signal, and

responsive to the posture analysis, interpreting the impedance signal as indicative of the eating.

Claim 114. (ORIGINAL) The apparatus according to claim 111, wherein to detect the eating, the control unit is adapted to:

measure an electrical impedance between two or more sites on a stomach of the subject, and generate an impedance signal responsive thereto,

compare a measure of a sudden, sustained change in the impedance signal to a threshold, and

detect the eating by analyzing the impedance signal, and responsive to the comparing.

Claim 115. (ORIGINAL) The apparatus according to claim 111, wherein to detect the eating, the control unit is adapted to analyze an electrical measurement of the stomach, and, responsive to the analysis, determine whether an electrical event indicative of a slow wave has occurred.

Claims 116-149. (CANCELLED)